

**PRELIMINARY AMENDMENT AND RESPONSE
TO RESTRICTION AND ELECTION OF SPECIES REQUIREMENTS**
Application No.: 10/591,614

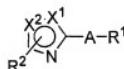
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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (previously presented) A thiazole derivative represented by the formula



or a pharmaceutically acceptable salt thereof,

wherein:

X¹ and X² are different from each other and represent a sulfur atom or a carbon atom;

R¹ represents a phenyl group;

a phenyl group substituted with 1 to 5 members selected from the group consisting of halogen atoms, alkyl groups having 1 to 6 carbon atoms, alkoxy groups having 1 to 6 carbon atoms, a hydroxy group, phenylalkoxy groups having 7 to 12 carbon atoms, and alkylamino groups having 1 to 6 carbon atoms;

a phenyl group condensed with a 5 to 7 membered hetero aromatic or non-aromatic ring having at least one hetero atom selected from the group consisting of N, O, and S;

a pyridyl group;

a quinolyl group;

an isoquinolyl group; or

a pyridyl group condensed with a 5 to 7 membered hetero aromatic ring having at least one hetero atom selected from the group consisting of N, O, and S;

R² represents a hydrogen atom, a halogen atom, an alkyl group having 1 to 6 carbon atoms, an alkyl group having 1 to 6 carbon atoms substituted with 1 to 5 halogen atoms, an alkoxy group

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having 1 to 6 carbon atoms, an alkanoyl group having 1 to 6 carbon atoms, or a hydroxyalkyl group having 1 to 5 carbon atoms; and

A represents a group which is represented by the formula



or



wherein:

R³ represents a hydrogen atom;
a hydroxy group;
an alkyl group having 1 to 6 carbon atoms;
a phenylalkyl group having 7 to 12 carbon atoms; or
a phenylalkyl group having 7 to 12 carbon atoms, substituted with a hydroxy group, an alkoxy group having 1 to 6 carbon atoms, an alkoxy group having 1 to 6 carbon atoms substituted with an alkoxy group having 1 to 6 carbon atoms, or an alkoxy group having 1 to 6 carbon atoms substituted with an alkylamino group having 1 to 6 carbon atoms,

R⁴ represents a phenyl group;
a phenyl group substituted with 1 to 5 members selected from the group consisting of halogen atoms, alkyl groups having 1 to 6 carbon atoms, alkoxy groups having 1 to

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6 carbon atoms, a carbamoyl group, and a cyano group;
a hydrogen atom;
an alkyl group having 1 to 12 carbon atoms;
an alkenyl group having 2 to 12 carbon atoms;
a cycloalkyl group having 3 to 7 carbon atoms;
an alkyl group having 1 to 12 carbon atoms substituted with an alkoxy group having 1 to 6 carbon atoms, a hydroxy group, an alkoxyphenylalkoxy group having 8 to 12 carbon atoms, a phthalimidoyl group, a toluenesulfonyloxy group, or a morpholino group;
an alkyl group having 1 to 6 carbon atoms substituted with 1 to 5 halogen atoms;
a cycloalkyl group having 3 to 9 carbon atoms substituted with an oxo group;
a tetrahydropyranyl group;
a 4-piperidinyl group;
a piperidinyl group substituted with an alkyl group having 1 to 6 carbon atoms or a t-butoxycarbonyl group;
a cyclohexanespiro-2'-(1,3-dioxoranyl) group;
a pyrrolidin-2-one-5-yl group;
a group represented by the formula -Y¹-Z¹-NR⁵-Z²-Y²-R⁶,
wherein:
Y¹ and Y² are the same or different from each other and represent a single bond or an alkylene group having 1 to 12 carbon atoms;
R⁵ represents a hydrogen atom or an alkyl group having 1 to 12 carbon atoms;
Z¹ and Z² are the same or different from each other and represent a single bond;
an alkylene group having 1 to 7 carbon atoms;
-CO⁻;
-CO₂⁻;

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-SO₂-; or

-OCO-, and

R⁶ represents

a cycloalkyl group having 3 to 7 carbon atoms;

an alkyl group having 1 to 6 carbon atoms substituted with 1 to 3 halogen atoms;

an alkenyl group having 2 to 6 carbon atoms;

an alkynyl group having 2 to 6 carbon atoms;

an amino group;

an amino group substituted with 1 to 2 groups selected from the group consisting of an alkyl group having 1 to 6 carbon atoms, a cycloalkyl group having 3 to 7 carbon atoms, and a t-butoxycarbonyl group;

a piperidino group;

a piperidinyl group;

a piperidinyl group substituted with an alkyl group having 1 to 6 carbon atoms;

a pyrrolidinyl group;

a piperazinyl group;

a piperazinyl group substituted with an alkyl group having 1 to 6 carbon atoms;

a morpholino group;

a hydroxy group;

an alkoxy group having 1 to 6 carbon atoms;

an alkoxy group having 1 to 6 carbon atoms substituted by a hydroxy group or an alkoxy group having 1 to 6 carbon atoms;

an oxetan-2-yl group;

a tetrahydrofuryl group;

a tetrahydropyranyl group;

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a hydrogen atom;
a phenyl group;
a phenyl group substituted with an alkoxy group having 1 to 4 carbon atoms; or
a group that forms a ring when linked to the nitrogen atom of the above formula;

or

a group represented by the formula -Y³-CO-R⁴¹,

wherein:

Y³ represents a single bond or an alkylene group having 1 to 7 carbon atoms,

R⁴¹ represents

a hydroxy group;

an alkoxy group having 1 to 6 carbon atoms;

a piperidino group;

a piperazin-1-yl group substituted by an alkyl group having 1 to 6 carbon atoms, a morpholinoalkyl group having 5 to 10 carbon atoms, or an alkylaminoalkyl group having 2 to 14 carbon atoms; or

a morpholino group.

2. (previously presented) The thiazole derivative or a pharmaceutically acceptable salt thereof according to claim 1, wherein R² is a hydrogen atom, a halogen atom, an alkyl group having 1 to 6 carbon atoms or an alkyl group having 1 to 6 carbon atoms substituted with 1 to 5 halogen atoms.

3. (previously presented) The thiazole derivative or a pharmaceutically acceptable salt thereof according to claim 1, wherein R² is an alkyl group having 1 to 6 carbon atoms or a trifluoromethyl group.

4. (previously presented) The thiazole derivative or a pharmaceutically acceptable salt thereof according to claim 1, wherein R² is a methyl group or a trifluoromethyl group.

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5. (previously presented) The thiazole derivative or a pharmaceutically acceptable salt thereof according to claim 1, wherein R¹ is a phenyl group condensed with a 5 to 7 membered hetero aromatic or non-aromatic ring containing at least one hetero atom selected from the group consisting of N, O, and S.
6. (previously presented) The thiazole derivative or a pharmaceutically acceptable salt thereof according to claim 1, wherein X¹ is a sulfur atom and X² is a carbon atom.
7. (withdrawn) An ALK5 inhibitor having, as an active ingredient, the thiazole derivative or a pharmaceutically acceptable salt thereof according to claim 1.
8. (withdrawn) The ALK5 inhibitor according to claim 7, which is a therapeutic agent for glomerulonephritis, diabetic nephropathy, hepatic fibrosis, liver cirrhosis, pulmonary fibrosis, proliferative vitreoretinopathy, or alopecia, or a hair growth agent.
9. (withdrawn) The ALK5 inhibitor according to claim 7 or 8, which is an external medicine.
10. (withdrawn) A hair follicle proliferation stimulant, having an ALK5 inhibitor as an active constituent.
11. (withdrawn) A hair growth stimulant or a hair growth agent, having an ALK5 inhibitor as an active ingredient.
12. (withdrawn) A thiazole derivative represented by the formula
- $$\begin{array}{c} X^2 \\ | \\ \text{X} \\ | \\ \text{N} \\ | \\ \text{R}^2 \end{array}$$
- or a pharmaceutically acceptable salt thereof,
wherein:
X¹ and X² are different from each other and represent a sulfur atom or a carbon atom;
R¹ represents a phenyl group;

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a phenyl group substituted by 1 to 5 members selected from the group consisting of halogen atoms, alkyl groups having 1 to 6 carbon atoms, alkoxy groups having 1 to 6 carbon atoms, a hydroxy group, phenylalkoxy groups having 7 to 12 carbon atoms, and alkylamino groups having 1 to 6 carbon atoms;

a phenyl group condensed with a 5 to 7 membered hetero aromatic or non-aromatic ring having at least one hetero atom selected from the group consisting of N, O, and S;

a pyridyl group;

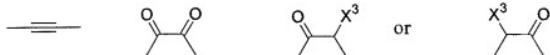
a quinolyl group;

an isoquinolyl group; or

a pyridyl group condensed with a 5 to 7 membered hetero aromatic ring having at least one hetero atom selected from the group consisting of N, O, and S;

R^2 represents a hydrogen atom, a halogen atom, an alkyl group having 1 to 6 carbon atoms, an alkyl group having 1 to 6 carbon atoms substituted with 1 to 5 halogen atoms, an alkoxy group having 1 to 6 carbon atoms, an alkanoyl group having 1 to 6 carbon atoms, or a hydroxyalkyl group having 1 to 5 carbon atoms; and

A^1 represents a group which is represented by the formula



wherein X^3 represents a hydrogen atom, a halogen atom, or an alkyl group having 1 to 6 carbon atoms.

13. (new) The thiazole derivative or a pharmaceutically acceptable salt thereof according to claim 1, wherein X^1 is a sulfur atom and X^2 is a carbon atom;

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R¹ is a phenyl group condensed with a 5 to 7 membered hereto aromatic or non-aromatic ring having at least one hereto atom selected from the group consisting of N, O, and S

R² is a methyl group;

and A represents a group which is represented by the formula

A:



wherein R³ is a hydrogen atom and

R⁴ is represented by the formula:

-Y¹-Z¹-NR⁵-Z²-Y²-R⁶, wherein -Y¹-Z¹ is -CH2-; R⁵ is a hydrogen atom; Z² is -CO2-; Y² is 2-methylpropan-1,3-diyl, and R⁶ is a hydrogen atom.